BIRCH CREEK
Health Clinic

Alaska Rural Primary Care Facility
Code and Condition Survey Report

July 23, 2001

I. EXECUTIVE SUMMARY

Overview

The Birch Creek Clinic is located on one side of the village washeteria building which was constructed in 1994. It is well built and generally in good condition. However, the clinic suffers from a general lack of space for storage and is not ADA accessible. Throughout the building, from the entry to the toilet room, there are problems with inaccessibility, due to either improper fixtures or blocked maneuvering space. The lack of adequate space for medical supplies and the lack of a trauma room prevent the staff from providing the level of care needed on a daily and emergency basis.

Renovation and Addition

The existing clinic is 546 s.f. and would require an addition of 954 s.f. to meet the 1500 s.f. minimum area recommended for a small clinic by the Alaska Rural Primary Care Facility study. The existing site could be used to allow for an addition of this size to the clinic. The floor plan layout would require the remodel of approximately 9% of the existing interior space. The cost of required renovations and code upgrades, combined with the cost of a new addition equal 109% of the cost of a new clinic.

New Clinic

Because the cost of renovation and addition is more than 75% of the cost of new construction, a new clinic of at least 1500 s.f. should be built to replace the existing clinic. Several possible sites are available near utilities and other community services that are of adequate size to accommodate a larger structure. A final site selection has not yet been made by the community.

II. GENERAL INFORMATION

A. The Purpose of the Report

ANTHC has entered into a cooperative agreement with the Denali Commission to provide management of the small clinic program under the Alaska Rural Primary Care Facility (ARPCF) assessment, planning, design, and construction. The purpose of the Code and Condition Survey Report is to validate the data provided by the community in the Alaska Rural Primary Care Facility Needs Assessment and to provide each community with a uniform standard of evaluation for comparison with other communities to determine the relative need among the communities of Alaska for funding assistance for the construction of new or remodeled clinic facilities. The information gathered will be tabulated and analyzed according to a set of fixed criteria that will yield a priority list for funding. Additionally, the relative costs of new construction vs. remodel/addition will be evaluated to determine the most practical and cost effective means to bring the clinics up to a uniform standard of program and construction quality. The information provided in this report is one component of the scoring for the small clinic RFP that the Denali Commission sent to communities in priority Groups 1 and 2.

B. The Assessment Team

The survey was conducted on May 25, 2001 by John Biggs, AIA, Architects Alaska and Ralph DeStefano, PE, RSA Engineering. Chet Crafts of ANTHC and Molly Patton of Tanana Chiefs Conference were the team escorts. Chet and Molly made introductions and conducted the village briefings. Team members who assisted in the preparation of the report included Stephen Schwicht and Ian VanBlankenstein of NANA/DOWL, project managers for the survey team, and Jay Lavoie of Estimations, Inc.

C. The Site Investigation

The format adopted is similar to the "Deep Look", a facility investigation and condition report used by both ANTHC and the Public Health Service, in maintaining an ongoing database of facilities throughout the country. Facilities are evaluated with respect to the requirements of the governing building codes and design guidelines. Building code compliance, general facility condition, and program needs have been evaluated. This written report includes a floor plan of the clinic and a site plan indicating the existing clinic site. Additional information gathered during the site investigation that is referred to in the report, which includes sketches of building construction details, a building condition checklist, and proposed plans for village utility upgrades, are not included with this report. This information is available for viewing at ANTHC's Anchorage offices and will be held for reference.

III. CLINIC INSPECTION SUMMARY

A. Community Information

The community of Birch Creek has a current population of 28 as published in the 2000 U.S. Census. It is located 26 miles southwest of Fort Yukon in the Fairbanks Recording District. It is a part of the Doyon Regional Corporation. Refer to the attached Alaska Community Database prepared by the Alaska Department of Community and Economic Development in Appendix C for additional community information.

B. General Clinic Information

The Birch Creek Clinic was constructed in 1994 as part of the village washeteria. This building is approximately 38' x 48'. The clinic is located in a front corner of one half of the building with the washeteria on one side, and with a building mechanical room behind the clinic. The clinic area is approximately 546 s.f. in size. The building is constructed of conventional frame walls, floor, and roof. The clinic is entered through the main building entry vestibule. The clinic entry leads into the administrative area which is also used as a reception and waiting area. This space lacks privacy, and furniture blocks the accessible route through the space. The toilet room is filled with file cabinets, and the handicapped shower is currently used as a storage area. This clinic suffers from a lack of storage space, which limits its ability to serve the community effectively.

C. Program Deficiency Narrative

The main programmatic deficiencies pertain to the overall size of the clinic and the lack of storage. Also, in general the clinic has multiple problems with ADA accessibility, mainly due to the lack of clear space and storage. There is a handicapped shower, but it is blocked by storage items. There is a waiting/reception area, but it is crowded with furniture for the office activities and is not wheelchair accessible. The exam rooms are fairly large, however, the door to one is blocked by a large refrigerator and is not accessible. In addition, the entry door to the building is not accessible and the ramp is too narrow for gurney access.

The following table illustrates a comparison between the current actual square footage (SF) and the 1500 s.f. minimum area recommended by the Alaska Rural Primary Care Facility study for a Small Clinic:

Table 1 – ARPCF Clinic Area Comparison

Purpose/Activity	#	Existing Net SF	#	ARPCF Small	Difference
Arctic Entry	1	39	1	50	11
Wait/Recep/Closet	1	140	1	100	-40
Trauma/Telemed/Exam	1	120	1	200	80
Office/Exam	1	120	1	150	30
Admin./Records		-	1	-	-
Pharmacy/Lab		-	1	80	80
Portable X-ray		-		-	-
Spec. Clinic/Health Ed./Conf.		-	1	150	150
Patient Holding/Sleep Room		-	1	80	80
Storage		-	1	80	80
HC toilet	1	67	1	60	-7
Janitorial Closet		-	1	30	30
Total Net Area				980	
Mechanical Room		-		114	114
Morgue		-		30	30

The Birch Creek Clinic has a current gross area of 546 s.f. This would require a gross building area expansion of approximately 954 s.f. in order to meet the 1500 s.f. minimum requirements for a Small clinic.

An analysis of the existing building's program functions follows. Please also refer to the floor plan in Section H:

- **Arctic Entries**: The front door has an arctic entry which is nominally 5' x 7'.
- **Waiting:** The waiting room is collocated with the administration and reception area. The waiting area generally lacks adequate clearance for handicapped access.
- **Trauma/Telemed/Exam:** None provided.
- **Office/Exam:** This clinic has two exam rooms which are of moderate size and functional. Access to one of the rooms is limited by the presence of a large refrigerator.

- **Administration/Records:** The administrative area includes the waiting room. This area is generally not secure and lacks privacy and confidentiality.

- **Pharmacy/Lab:** None provided.

- **Specialty Clinics:** Specialty clinics require the use of one of the exam rooms and the corridor space.

- **Patient Holding/Sleep:** None provided in the clinic.

- **Storage:** None provided.

- **HC Toilet Room:** Access within the HC toilet room is blocked by storage items. The toilet room lacks HC toilet and sink fixtures.

- **Janitor Closet:** None provided.

- **Ancillary Spaces:** There are no ancillary spaces in this clinic.

D. Architectural/Structural Condition

The building which houses the clinic is approximately 38' x 48', relatively new, and in good condition. The building foundation is heavy timber 12x12 blocks on double 6x12 pads. The floor 5x14 paralam floor beams rest on the blocks and support the TJI floor system. The walls are 2x6 frame walls with batt insulation and plywood siding. The roof is good quality metal roofing over plywood with 2x6 trim and flashing. The roof is supported by TJI framing. The overall building is solid and in stable condition.

E. Site Considerations

The existing site could be used to allow for an addition to the clinic portion of the building. If a replacement clinic is constructed, a site near the existing clinic would be advantageous due to its proximity to the water treatment plant, the washeteria, and its location along the main street. Several possible sites are available with access to utilities including village water, sewer, power, and telephone service and other community services. A final site selection has not yet been made by the community.

F. Mechanical Condition

Heating and Fuel Oil: Heat for the clinic is provided by two fuel-fired boilers shared with the adjoined washeteria. The boilers are well maintained and have been provided with all required safeties. It appeared that the hydronic system had been filled with an automotive (or non-building) type glycol. The system needs to be dumped, flushed and refilled with a heating system grade Propylene Glycol solution with the proper inhibitors such as Dowfrost. Each zone of heating in the building is provided with its own circulation pump. The clinic has a

single zone of baseboard heating around its perimeter. The fuel system consists of a 260-gallon tank located against the outside of the building, which is piped to a 25-gallon day tank located in the boiler room. The fuel tank on the outside of the building does not have the required clearance to the building, is not UL listed, not piped correctly, and improperly vented. It needs to be replaced and installed in a new location with proper supports, venting and fuel piping. The day tank is acceptable except that the vent does not terminate outside the building.

Ventilation: There is no mechanical ventilation or exhaust for the clinic. The only source of ventilation for the occupied spaces is though operable windows. The clinic needs to be provided with a mechanical ventilation system and should not rely on operable windows alone.

Plumbing: Domestic water is provided to the clinic from the village water supply. Hot water is supplied in the clinic from a fuel fired water heater located in the washeteria. The waste from the building gravity flows to the village sewer treatment system. Plumbing fixtures in the clinic include a toilet, lavatory, and shower/tub in the restroom. The toilet meets ADA requirements except grab bars were not provided. The remaining fixtures do not meet ADA standards. There are sinks in the exam rooms and a mop sink in the washeteria janitor's closet.

G. Electrical Condition

Power: A 120/240-volt service is provided to the building's meter from overhead.

A 100 amp main disconnect is provided at the meter. Grounding from the meter base is provided to a grounding rod. There is a 200 amp main breaker after the meter that serves the building electrical panel located in the washeteria boiler room. The panel is rated for 225 amps. It has a maximum capacity of 40 breakers, 22 breakers have been installed (one is double pole), and two of the breakers are spares. All wires from the panel were run in EMT. An appropriate number of standard receptacles are installed. The bathroom and exam room sink outlets have GFI protection through GFCI breakers in the breaker panel.

Lighting and Emergency Fixtures: Interior lighting is provided from Fluorescent fixtures and the lighting levels appear adequate. There are no exterior lights installed outside the clinic. Emergency lights and emergency exit signs were not installed in the clinic but there were battery operated smoke detectors installed in the waiting room and exam rooms.

Telecommunications: Two phone lines and one fax line serve the clinic. There is Internet service to the clinic, but a Telemed system had not yet been installed.

H. Existing Facility Floor Plan

See following sheet for the floor plan of the existing clinic.

J. Community Plan

Refer to the attached community plan for location of the existing clinic and the proposed location for the new clinic. If the existing clinic site is the preferred location or if a new site has not yet been selected, only the existing clinic location will be shown.

IV. DEFICIENCY EVALUATION AND COST ASSESSMENT

The attached deficiency reporting forms are based on Public Health Service form AK H SA-43. The forms are numbered sequentially for each discipline starting with **A01** for Architectural and structural deficiencies, **M01** for Mechanical deficiencies and **E01** for Electrical deficiencies.

A. Deficiency Codes

Deficiencies are further categorized according to the following PHS Deficiency codes to allow the work to be prioritized for federal funding, should that apply. Deficiency codes used in this survey include:

02 **Fire and Life Safety:** These deficiencies identify areas where the facility is not constructed or maintained in compliance with provisions of the state mandated building codes including the International Building Code, The Uniform Fire Code, NFPA 101, The Uniform Mechanical and Plumbing Codes and The National Electrical Code.

03 **Safety:** These deficiencies identify miscellaneous safety issues.

04 **Environmental Quality:** This addresses DEC regulations, hazardous materials and general sanitation.

05 **Program Deficiencies:** These are deficiencies which show up as variations from space guidelines established in the Alaska Primary Care Facility Facility Needs Assessment Project and as further evaluated through observation at the facility site and documented in the facility floor plans.

07 **Disability Access Deficiencies:** The items with this category listing are not in compliance with the Americans with Disabilities Act.

08 **Energy Management:** These deficiencies address the efficiency of heating systems/fuel types and the thermal enclosures of buildings.

11 **Structural Deficiencies:** These are deficiencies with the fabric of the building. It may include the foundations, the roof or wall structure, the materials used, the insulation and vapor retarders, the attic or crawl space ventilation and the general condition of interior finishes. Foundation systems are included in this category.

12 **Mechanical Deficiencies:** These are deficiencies in the plumbing, heating, ventilating, air conditioning, or medical air systems.

13 **Electrical Deficiencies:** These are deficiencies with electrical generating and distribution systems, fire alarm systems and communications systems.

14 **Utilities:** This category is used for site utilities, as opposed to those within the building and may include sewer lines and water and power distribution.

B. Photographs

Each sheet has space for a photograph. Some deficiencies do not have photos. Photographs do not cover all areas where the deficiencies occur but are intended to provide a visual reference to persons viewing the report who are not familiar with the facility. Additional photographs of the clinic and the surrounding area are included in Appendix B.

C. Cost Estimate General Provisions

New Clinic Construction

- **Base Cost**

The Base Cost provided in Section VI of this report is the direct cost of construction, inclusive of general requirements (described below) and contingency for design unknowns (an estimating contingency) The base cost is exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The Project Factors and Area Cost Factor are multipliers of the base costs.

General Requirements are based on Anchorage costs without area adjustment. It is included in the Base Cost for New Clinics. These costs are indirect construction cost not specifically identifiable to individual line items. It consists of supervision, materials control, submittals and coordination, etc. The general requirements factor has not been adjusted for Indian Preference.

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned.

- **Project Cost Factors**

  Equipment Costs for new medical equipment has been added at 17% of the cost of new floor space.

  Design Services is included at 10% to cover professional services including engineering and design.

  Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

  Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Estimated Total Project Cost of New Building**

This is the total estimated cost of the project, including design services. The construction contract will be work subject to Davis Bacon wages, and assumes construction before year-end 2001. No inflation factor has been applied to this data.

Remodel, Renovations, and Additions

- **Base Cost**

The Base Cost provided in the specific deficiency sheets is the direct cost of construction, exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Most of the deficiency items do not constitute projects of sufficient size to obtain efficiency of scale. The estimate assumes that the projects are completed either individually, or combined with other similar projects of like scope. The numbers include moderate allowances for difficulties encountered in working in occupied spaces and are based on remodeling rather than on new construction costs. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The General Requirements, Design Contingency and Area Cost Factors are multipliers of the base costs.

The cost of Additions to clinics is estimated at a unit cost higher than New clinics due to the complexities of tying into the existing structures.

Medical equipment is calculated at 17% of Base Cost for additions of new space only and is included as a line item in the estimate of base costs.

- **General Requirements Factor**

General Requirements Factor is based on Anchorage costs without area adjustment. The factor is 1.20. It is multiplied by the Base Cost to get the project cost, exclusive of planning, architecture, engineering and administrative costs. This factor assumes projects include multiple deficiencies, which are then consolidated into single projects for economies of scale. The general requirements factor has not been adjusted for Indian Preference.

- **Area Cost Factor**

The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

- **Contingency for Design Unknowns (Estimating Contingency)**

The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned. The factor used is 1.15.

- **Estimated Total Cost**

This is the total estimated bid cost for work completed under Davis Bacon wage contracts, assuming construction before year-end 2001. This is the number that is entered in the front of the deficiency form. No inflation factor has been applied to this data.

- **Project Cost Factors**

Similar to new clinics, the following project factors have been included in Section VI of this report.

Design Services is included at 10% to cover professional services including engineering and design.

Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

- **Estimated Total Project Cost of Remodel/Addition**

This is the total estimated cost of the project including design services, the construction contract cost for work completed under Davis Bacon wages and assuming construction before year-end 2001. No inflation factor has been applied to this data.

V. SUMMARY OF EXISTING CLINIC DEFICIENCIES

The attached table summarizes the deficiencies at the clinic and provides a cost estimate to accomplish the proposed modifications. If all deficiencies were to be addressed in a single construction project there would be cost savings that are not reflected in this tabulation. The total cost of remodel/addition shown in Section VI is intended to show an overall remodel cost that reflects this economy. Refer to Section VI for a comparison of remodel/addition costs to the cost of new construction. The specific deficiency sheets are included in Appendix A.

VI. NEW CLINIC ANALYSIS

The decision on whether to fund new clinic construction or a remodel/addition of the existing clinic is to be determined by comparing the cost of a new facility designed to meet the program requirements of the Alaska Rural Primary Care Facilities minimum area requirements with the projected combined cost of renovating, remodeling and adding onto the existing building to provide an equivalent facility. If the cost of the remodel/addition project is greater than 75% of the cost of constructing an altogether new facility then a new facility is recommended. That ratio is computed as follows:

- **The cost of a new clinic in Birch Creek is projected to be:**

Base Anchorage Cost per s.f.		$183/ s.f.
Medical Equipment Costs @ 17%		$31
Design Services 10%		$18
Construction Contingency 10%		$18
Construction Administration. 8%		$15
Sub-total		$265/ s.f.
Area Cost Factor for Birch Creek	1.66*	
Adjusted Cost per s.f.		$439/ s.f.

Total Project Cost of NEW BUILDING 1,500 x $439 = $658,500

- **The cost of a Remodel/Renovation/Addition is projected to be:**

Projected cost of code/condition renovations (From the deficiency summary)
90% of cost of code/condition improvement** $78,604 Renovation

Projected cost of remodeling work (See A08)
546 s.f. clinic @ 9% remodel = 50 s.f. $6,695 Remodel

Projected cost of building addition (See A07)
1,500 s.f. – 546 s.f. = 954 s.f. $473,935 Addition
Design 10%, Const. Contingency 10%, Const. Admin. 8% $156,586

Total Project Cost of REMODEL ADDITION **$715,820**

- **Ratio of remodel:new is $715,820 : $658,500 = 1.09X**

The cost of a remodel/addition for this clinic would cost 109% the cost of a new clinic, therefore, a new clinic is recommended for this community.

* The Area Cost Factor was refined by Estimations, Inc. in July 2001 based on information obtained during the site visit.

** The 90% factor represents economy of scale by completing all renovation work in the same project.

Appendix A: SPECIFIC DEFICIENCIES LISTING

Refer to the attached sheets for the listing of the individual deficiencies and the corrective action recommended.

Appendix B: GENERAL SITE PHOTOGRAPHS

The following sheets provide additional photographic documentation of the existing building and surroundings.

Appendix C: ADCED Community Profile

Refer to the attached document prepared by Alaska Department of Community and Economic Development profiling the community of Birch Creek.

This Report was Prepared by

NANA/DOWL, JV

with assistance from

Architects Alaska
and
RSA Engineering
Under
Contract No. ANTHC-98-03
Delivery Order 01-D-0558

A Division of DOWL

Architects Alaska
A Professional Corporation

Architecture
Facility Planning
Interior Architecture

900 W. 5th Ave. Suite 403
Anchorage, AK 99501
(907) 272-3567

R S A Engineering, Inc.